

Meeting Minutes

March 1, 2017 NWIRP/Northrop Grumman Groundwater Quarterly Coordination Meeting

1. Introductions

- *Following introductions, there was discussion on a recent Citizens Campaign for the Environment (CCE) press release related to 1,4-Dioxane.*
- *The water purveyors requested assistance from the health departments on addressing concerns raised by residents related to 1,4-Dioxane. The water purveyors are overwhelmed with calls from concerned citizens. Some of the claims made regarding 1,4-dioxane are misleading and should be corrected. Water districts could use regulators support in getting message out that counters the misleading claims made on 1,4-Dioxane. There was discussion on the State convening an advisory panel for establishing an enforceable 1,4-Dioxane standard.*
- *There was also a request to stop referring to the groundwater contaminant plume as the "Bethpage" plume.*

2. U.S. Navy Update

- a. Additional contaminant/plume delineation
 - *Expecting to install 2-3 additional VPBs to better understand contaminant distribution on the west-side of groundwater plume.*
- b. Sentinel/Outpost monitoring well program results
 - *U.S. Navy currently drilling VPB-170 along the west-side of groundwater plume.*
 - *U.S. Navy continues with the routine groundwater monitoring. 4th quarter 2016 data were submitted in December and the 1st quarter sampling for 2017 is underway. Navy will provide a map with 4th Quarter TCE data to meeting attendees.*
- c. GM-38 update
 - *U.S. Navy continues to operate GM-38 and will be evaluating the treatment system to determine if the system can be taken off-line or the overall pumping rate reduced.*
- d. Status of RE-108 Area
 - 1) RE-108 schedule
 - *The overall RE-108 schedule remains the same, but the Navy is proposing an Interim Hotspot Conveyance System (discussed under 2(g) below).*
 - *The Navy is also preparing for a recharge basin evaluation to determine infiltration capacity. This is scheduled for spring 2017.*
 - 2) Recovery Well (RE-137) status
 - *The Navy is preparing for a pumping test at RE-137 to evaluate pumping rates and possible capture zones. This is scheduled for March/April 2017.*
 - 3) Property acquisition for RE-108 treatment system (wells, conveyance, treatment, and discharge)
 - *The Navy indicated that properties for treatment plant, extraction wells and recharge have been identified for the RE-108 system.*
 - *The Navy will send to DEC the locations of the properties that they have identified for the RE-108 system.*
 - *The Navy is trying to keep conveyance piping runs as short as possible when identifying properties.*
 - *There was a concern raised that one parcel identified for a recovery well might not be far enough south to capture concentrations that the Navy previously agreed to attempt to capture [500 ppb].*

- *The Navy indicated that a fee simple property acquisition is unlikely. Instead, the Navy would likely pursue easements which would be simpler and quicker. It was noted any long-term easement for a property would need to be less than \$1 million/year.*

4) Possible use of BWD Plant 6

- I. Pumping wells
- II. Treatment system
- III. Property

- *The Navy discussed their evaluation of BWD Plant 6. The system is nearly 27 years old, has no off-gas treatment capability, and would require two years for demolition and reconstruction. Because of this and combined with its distant location relative to the recovery wells, the Navy does not believe the use of BWD Plant 6 is a viable option.*
- *Discussion ensued with questioning why Navy would not want this property considering how difficult it is to acquire property in the area. It was also noted that many of the BWD Plant 6 system components are new.*
- *There was also discussion on the agreements between the Navy and BWD. This involved Navy reimbursing BWD for Plant 6 upgrades, but would not allow reimbursement for AOP treatment to address 1,4-Dioxane. BWD wants to build AOP treatment into the Plant 6 upgrades. This treatment system would be designed to reduce 1,4-Dioxane to non-detect.*
- *Discussion continued on the different options for the RE-108 treatment system. DEC and EPA asked Navy to provide an analysis of cost and time to implement differences associated with treating groundwater at BWD Plant 6 versus treating groundwater at the GM-38 treatment plant.*

5) Possible Re-Use of Treated Water from BWD Plant 6 for Public Water Supply

- *DOH indicated that a water supply well should not be designed for the dual purpose of serving as a remediation well. It was reiterated that short-term, dual use would be allowed by DOH, because over the long-term the approach would be consistent with DOH's goal of putting the best quality water into distribution*

6) Overview of white paper on disposal options

- *There was no discussion on this topic and the item will be removed from future agendas.*

e. PCB removal at Site 1, Plant 3

- *There was no discussion on this topic and the item will be removed from future agendas.*

f. Community Outreach Activities

1) April 5, 2017 RAB Meeting

- *There was no specific discussion on this topic.*

g. Interim Hotspot Conveyance System

- *The Navy described the Interim Hotspot Conveyance System concept. This is an effort to begin remediation quicker and is in response to concerns related to the RE-108 schedule.*
- *Work on the overall RE-108 area will continue during this interim process.*
- *The Interim Hotspot Conveyance System would include a recovery well in the utility ROW area near Hicksville Road. This is the center of the RE-108 hotspot. Groundwater, extracted at a rate of approximately 300-500 gpm would be transmitted in piping located in the ROW to the GM-38 air stripper for treatment followed by discharge to the Arthur Ave. recharge basin.*
- *It was pointed out that there may be recharge basin capacity issues as Northrop Grumman was also planning on using the Arthur Ave. recharge basin for returning treated water from the RW-21 system to the groundwater system.*
- *Northrop Grumman offered to assist the Navy with possible groundwater modeling of this Interim Hotspot Conveyance System concept. Mike Wolfert to follow-up with the Navy on this topic.*

- *As noted above, DEC and EPA asked Navy to provide an analysis of cost and time to implement differences associated with treating groundwater at BWD Plant 6 versus treating groundwater at the GM-38 treatment plant.*

3. Northrop Grumman Update

- a. Status of ONCT and BPCP Groundwater Containment Systems
 - *The OU2 ONCT continues to withdraw approximately 6.2 MGD and most treated water is reintroduced to aquifer via south recharge basins.*
 - *Since 1998, there has been a steady decline in annual mass removal and a total of approximately 199,400 pounds of VOCs have been removed from the aquifer.*
 - *A question was asked if the containment systems are effective, why are concentrations increasing downgradient. ARCADIS indicated that this is likely related to contaminants that were already downgradient or beyond the groundwater containment and treatment systems.*
 - *There was a request to have the influence of BWD Well 6-2 factored into the groundwater trend data.*
 - *The OU3 ONCT systems continues to operate four wells with an average withdrawal rate of approximately 210 GPM.*
 - *Since 2009, the OU3 ONCT system has removed approximately 2,159 pounds of VOCs from the aquifer*
- b. Hydraulic Effectiveness Evaluation
 - *Data collected from the two groundwater containment systems show bifurcated plumes with decreasing contaminant concentrations in groundwater downgradient of the containment systems.*
- c. Status of RW-21 Area
 - 1) December groundwater quality sampling
 - *The December 2016 groundwater sampling results were reviewed. Overall, the results are similar to previous sampling.*
 - *There was discussion on the status of sampling the actual recovery wells (RW-21 and RW-22). Since no pumps are in these wells yet, and the wells are large diameter and would require large purge volumes, the wells have not been sampled during the monitoring well sampling events. The wells were sampled during development using air-lifting techniques and the results are lower because of the sampling method. The water districts indicated that they would like to have the recovery wells sampled.*
 - 2) RW-20 installation
 - *RW-21 and RW-22 installed. Waiting on Town of Oyster Bay approval for RW-20 installation.*
 - *Ed Hannon has a meeting with the Town of Oyster Bay this Friday (3/3/2017) and the permit application is on the Town Board agenda for 3/7/2017).*
 - 3) Conveyance piping, treatment system, and discharge status
 - *It was noted that King Kullen owns the property where RW-21 area transmission lines will be located so Northrop Grumman will have to make access arrangements.*
 - *It was also noted that transmission lines are located near Deadman's Curve. This may have historical significance and Northrop Grumman is completing a historical survey that will be provided to the DEC upon completion.*
 - 4) Schedule
 - *Northrop Grumman is still working to have the system operating by the end of 2017.*
- d. Residential Soil Removal
 - *There was no discussion on this topic and the item will be removed from future agendas.*
- e. PCB/Metals/VOC Cleanup at BPCP
 - *There was no discussion on this topic and the item will be removed from future agendas.*

f. Community Outreach Activities

- 1) NG/NYSDEC development of community outreach materials, as needed, for future NG work
 - *There was no specific discussion on this topic.*

4. U.S. Navy and Northrop Grumman Coordination

- a. Recent activities related to project coordination
 - *Technical Exchange Meeting between U.S. Navy and Northrop Grumman held on 11/16/2016.*
 - *Northrop Grumman and U.S. Navy continue coordinating routine groundwater sampling and sharing data.*
- b. Coordination on RE108 hot spot work
 - *Northrop Grumman continues to review data collected from the RE-108 area.*

5. Bethpage Water District Plant 6 Update

- a. Plant 6 upgrade project
 - *This was discussed during the U.S. Navy update under agenda item #2.*

6. NYSDEC Update on Status of efforts regarding Chapter 543 of the Laws of 2014

- a. Evaluation of options relative to the groundwater plume associated with the former Navy/Grumman Bethpage facility – and next steps following the HDR report.
 - *DEC indicated that this topic was introduced to many of the quarterly meeting attendees during the February 17 roundtable and that this engineering study will expand on the earlier HDR Remedial Options Report.*
 - *The study will evaluate full plume containment along with other options.*
 - *The DEC expects initial results in the fall of 2017.*
 - *The scope of services issued to HDR does include field work and groundwater modeling components.*
 - *The DEC will provide periodic check-ins with the group throughout this process.*
 - *This is being completed as part of the DEC PRAP and ROD process.*
 - *A concern was raised about 1,4-Dioxane being addressed. The DEC indicated that 1,4-Dioxane will be factored into this evaluation.*

7. NYSDEC Radium 226 and 228 Sampling

- *There was no specific discussion on this topic. This will be included on the next quarterly meeting agenda.*

8. Follow-Up Items From Previous Meetings:

- 1) NYSDEC approach to acquiring property as an option for the U.S. Navy and Northrop Grumman.
 - *This was discussed during the U.S. Navy update under agenda item #2.*
- 2) Follow-up on legal discussions related to BWD possibly purchasing parcel/s and leasing to U.S. Navy.
 - *This was discussed during the U.S. Navy update under agenda item #2.*
- 3) Navy update on provision in the Water Infrastructure and Investment Act requiring reporting to Congress.
 - *The Navy indicated that they will meeting the timeframe and reporting for this requirement.*
- 4) DOT 11-acre basin - get contact at DOT: Stan Carey provided contact on May 16.
 - *Stan Carey provided this information to the U.S. Navy and this item can be removed from future agendas.*

9. Next Quarterly Meeting Date, Location, and Adjournment

- *Northrop Grumman offered to host the 2nd quarter meeting.*
- *Will consider the 1st and 3rd weeks of June 2017.*